

AGRICULTURE INFORMATION NEEDS OF FARMERS: AN OVERVIEW

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ABSTRACT

Agriculture is the backbone of Indian economy. Lack of agricultural information has been identified as the most powerful deterrent, to the farmers in the whole gamut of agricultural system. The study entitled “Agriculture information needs of farmers: an overview” was conducted with the objective to identify and analyse the agriculture information needs of farmers. For identifying and analyzing the agriculture information needs of farmers in Thrissur district, three Panchayats were selected from the 92 Grama Panchayats of Thrissur district, based on the highest area under cultivation for major crops. A total of 90 farmers constitute the sample for the study. Data were analysed, with the help of statistical tools, such as simple percentages, scores and indices and Chi-square test. A gap analysis was conducted, where the gap between awareness and access of information needs by farmers was examined. The most important agricultural information needs of the farmers, in the study area are about government schemes, related to loans and subsidies, followed by market information. In agricultural operations, the information gap is zero in production and market information, which indicate that, these are the two important agriculture information, farmers accessing regularly. At the same time, the information gap is 100 percent for labour in which, the awareness is the lowest.

KEYWORDS: *Farmers & Agriculture information*

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INTRODUCTION

Agriculture is the backbone of Indian economy. Lack of agricultural information has been identified, as the most powerful deterrent to the farmers in the whole gamut of agricultural system. In the changing scenario, agriculture is becoming information oriented, and access to accurate and adequate information is very essential, for increasing agricultural production and productivity. In farm management, the decisions are guided by information. Farmers are therefore engaged in information search, in order to fill the information gap and to satisfy their goals. Keeping this in mind, an attempt is made here to understand farmer's perspective about agricultural information needs in general. Agricultural information refers to all published and unpublished knowledge, on general aspects of agriculture and consists of innovations, ideas and technological practices. Such information needs include information on recommended practices, soil conservation, prevention of plants and animal disease, fertiliser application, farm machineries, proper storage of farm products, marketing techniques etc. In this section, first the overall agricultural information needs of the farmers are identified and presented, followed by the analysis of the awareness, access and gap, in each of this agricultural information identified.

Objectives of the Study

The objective of the study is:

- To identify and analyze the agriculture information needs of farmers in Thrissur district

MATERIALS AND METHODS

For identifying and analyzing the agriculture information needs of farmers in Thrissur district, three Panchayats were selected from the 92 Grama Panchayats of Thrissur district, based on the highest area under cultivation for major crops. The selected panchayats are Varantharapilly (7265.84 ha), Pananchery (7251 ha) and Mattatur (4383.12 ha). From these three panchayats, 90 farmers were selected, by using stratified purposive sampling. The list of farmers of each of these three panchayats was collected from the concerned Krishibhavan and farmers were categorised into three strata, as small, marginal and large farmers based on their landholdings. From each category, 10 farmers were selected from each Panchayat using purposive sampling i.e., farmers who are undertaking cultivation of major crops like paddy, coconut, rubber, banana, nutmeg and arecanut only were selected. Thus, a total of 90 farmers constitute the sample for the study. The study has been fundamentally based on primary data. Data were analysed, with the help of statistical tools, such as simple percentages, scores and indices and Chi-square test. A gap analysis was conducted, where the gap between awareness and access of information needs, by farmers was examined.

RESULTS AND DISCUSSIONS

The agriculture information needs of the farmers are identified and classified into information regarding production, post-harvest techniques, market/ marketing, credit, agricultural insurance, government schemes and labour. Information need index is developed to rank these needs. For the construction of information need index, the respondents were asked to rate their information needs, with respect to general agricultural information on a five point scale. Based on the information need index, information needs are ranked and is shown in Table 1.1.

Table 1.1: Agriculture Information Needs of Farmers: Farmer Category - Wise

Sl. No	Information Needs	Information Need Index				Rank
		Marginal Farmers	Small Farmers	Large Farmers	Total	
1	Production information	58.7	62	61.3	61.6	6
2	Post – Harvest techniques	40	42.0	44	42	7
3	Market/ Marketing	87.3	98.7	100	96	2
4	Credit information	77.3	90.6	80.0	82.7	4
5	Agricultural insurance	83.3	94.7	97.3	94.4	3
6	Government schemes	95.3	93.3	100	97.3	1
7	Labour information	65.3	66.7	70.7	65.3	5

Source: Compiled from primary data

It is clear from Table 1.1 that, the most needed agriculture information is about government schemes, followed by market information. This is contrary to the finding of Bachhav (2012), who reported that, most of the farmers need market information, followed by information on government schemes. But, the large farmers have given equal weight to information need on government schemes and market, since both these information have direct impact on the profitability of the farming operations. Most of the respondents are unaware of various government schemes, implemented for them. Only, farmer leaders have knowledge about the schemes in operation, in the study area for farmers. Farmers are getting inputs like fertilisers, seeds and equipment at different subsidy rates from Krishi Bhavan, based on different criteria, such as size of landholdings and number of crops under Rashtriya Krishi Vikas Yojna (RKVY) and Sustainable Development of Rice (SDR). Production bonus is also availed by the paddy farmers in cash. Other than this, they need information on new central and state sponsored schemes implemented for farmers. To build awareness, farmers have suggested awareness

programmes and seminars, about government schemes through Krishi Bhavan.

At the same time, farmers highly need market information on daily basis, since market price and demand for the produce are changing every day. Presently, majority of the farmers are availing market information through newspaper, television and from fellow farmers. Farmers' market is another important source of market information to most of the marginal and small farmers. The Market Information System run by the VFPC and farmers' club provide price information to the farmers only on the market day, when they reach the market. Once they come to the market with the produce, the farmers have no bargaining power over price, and they are forced to make distress sales.

Post – harvest techniques have the least information need index. The farmers have traditional knowledge of post-harvest techniques, especially about paddy and rubber. They have knowledge about the level of moisture content of paddy and the different grades of rubber. They utilise the storage facility of SUPPLYCO for paddy and that of Krishi Bhavan, for coconut.

Along with prioritising the agricultural information needs of the farmers, it is important to know the present state of affairs of the farmers regarding awareness about the identified agricultural information needs, their access to this information, and the existence of information gap.

Awareness, Access and Gap in Information on Agriculture

Farmers' information requirements vary with the stages of production in agriculture. In general, all farmers seek to acquire complete, high quality and timely information to make decisions related to risk, throughout the year. Farmers can reduce the probability and magnitude of losses due to risk and uncertainty, if they are able to access relevant and timely information.

Awareness with respect to information on agriculture refers to whether farmers have knowledge about particular agricultural information. Access to agricultural information denotes whether the information is available for use and the farmer has approachability to the information which will add to his existing level of information about a particular aspect. Information gap is the difference between awareness and access of agricultural information by the respondent farmers.

Awareness, access and information gap with respect to the seven identified agricultural information needs (Table 1.1), viz, information regarding production, post-harvest techniques, market/ marketing, credit, agricultural insurance, government schemes and labour are presented in the ensuing sub sections.

Awareness, Access and Gap in Production Information

Production information consist of information on various agricultural inputs such as improved variety of seeds, pesticides, fertiliser application, agricultural equipment, recommended practices such as seed treatment, soil fertility, irrigation, pest and disease management, weather conditions, planting methods, harvest technology etc. The awareness, access and gap regarding production information are depicted in Table 1.2

Table 1.2: Awareness, Access and Gap in Production Information – Farmer Category - Wise

Sl. No	Type of Farmer	Awareness	Access	Information Gap
1	Marginal Farmer	30(100)	30(100)	Nil
2	Small Farmer	30(100)	30(100)	Nil
3	Large Farmer	30(100)	30(100)	Nil

Table 1.2: Contd.,				
4	All Farmers	90(100)	90(100)	Nil

Source: Compiled from primary data

Note: Figures in parenthesis represent percentage share of each to category total

From Table 1.2 it can be observed that, cent percent of the farmers are aware of and have access to production information. Hence, there is no information gap, with respect to production information. They have common knowledge about package of practices of various crops. They have access to Krishi Bhavan, fellow farmers, friends, relatives and Secretary of Padasekharam, for production information. A study by Achugbue and Anie (2011), has also reported that, majority of the farmers rely on their community leader, friends and relatives, and for acquisition of production information, which supports the findings of this study. Among the various information needs, regarding production information, the most important one, pointed out by farmers are information on pest and disease management. Although, there is no gap with respect to production information, some of the female farmers remarked that, information regarding benefits like inputs and subsidy through Krishi Bhavan are not disseminated to them, at the right time.

Awareness, Access and Gap in Information on Post Harvest Techniques

Post harvest handling is the stage of crop production immediately following harvest, including curing, operations prior to packaging such as cleaning, grading and sorting, packaging, storing and protection from pests. Post harvest treatment largely determines the final quality, whether a crop is sold for final consumption or used as an ingredient in processed food product, protects food safety, and reduces losses between harvest and consumption. The shelf life of the produce depends on the post-harvest techniques adopted by the farmers. When a crop is ready for harvest, farmers need information on the various post harvest techniques that can be adopted. In the study area except for tree fruits such as coconut and arecunut, all other crop produces need post harvest care. The information awareness, access and information gap regarding post harvest techniques of the respondent farmers are presented in Table 1.3.

Table 1.3: Awareness, Access and Gap in Information on Post Harvest Techniques

Sl. No	Type of Farmer	Awareness	Access	Information Gap
1	Marginal Farmer	30 (100)	22 (73.3)	8 [26.7]
2	Small Farmer	30 (100)	29 (96.7)	1[3.3]
3	Large Farmer	30 (100)	30 (100)	0[0]
4	All Farmers	90 (100)	81 (90)	9[10]

Chi-Square: Asymp. Sig. 0.001*

*Significant at 1%

Source: Compiled from primary data

Note: (i) Figures in simple bracket represent percentage share of each to the category total.

(ii) Figures in square bracket represent percentage share of gap to awareness.

All the farmers are aware, about post harvest techniques, as evident from Table 1.3, and majority of them (90%) have access to information on post-harvest techniques. Farmers have traditional knowledge about the techniques of post-harvest care to be adopted for their crop produce. Besides this, they seek information from farmer leaders, fellow farmers and relatives for further details and clarification. Paddy farmers have to ensure a particular level of moisture content for their paddy to be eligible for supply to SUPPLYCO. They are getting such information from the Secretary of their Padasekharam. Rubber cultivators have to make rubber sheets, at specified grades and weights, prescribed by Rubber

Board, the information on which are obtained from newspapers and co-operative societies. Farmers, who are cultivating coconut and arecanut, are not accessing any source of post-harvest information. Information gap is more in the case of marginal farmers (26.7%), since, compared to other category of farmers, they have less number of crops and one arecanut farmer is a marginal farmer. It is noteworthy that, large farmers are fully aware and they fully access information regarding post – harvest techniques. Chi-Square test is found to be significant at one percent level, which implies that, access to post harvest technique is significantly related to category of farmers.

Awareness, Access and Gap in Market Information

Market information, in a narrow sense refers to price information. In a broad sense, it includes information on prevailing market price, comparative prices in different markets, historical price data, procurement prices fixed by the government and the effective way to use these price information to make farming operations profitable and competitive. As already found farmers are in need of market information on daily basis (Table 4.10). The awareness, access and information gap regarding market information is illustrated in Table 4.13.

Table 1.4: Awareness, Access and Gap in Market Information: Farmer Category – Wise

Sl. No	Type of Farmer	Aware	Access	Information Gap
1	Marginal Farmer	30(100)	30(100)	Nil
2	Small Farmer	30(100)	30(100)	Nil
3	Large Farmer	30(100)	30(100)	Nil
4	All Farmers	90(100)	90(100)	Nil

Source: Compiled from primary data

Note: Figures in parenthesis represent percentage share of each to category total

Market information is one of the most important information needs of farmers (Table 1.1). It is evident from Table 1.4 that, cent percent of the farmers are aware of and have access to marketing information. Hence, no information gap is felt by the farmers, with respect to market information. For most of the respondents, market information means information about current market price and they are accessing newspaper for getting the same. Most of the farmers are not spending time to check the prices in different market or to collect historical data of prices of their produces. From newspaper, they are obtaining current market price of the produce, in Thrissur district and changes in procurement price, fixed by government from time to time. There are farmers, especially marginal farmers, who are accessing price information, from the market itself. Stability in price is the important demand of the respondent farmers and according to them, it will help to increase their bargaining power and eliminate middleman from marketing channel.

Awareness, Access and Gap in Credit Information

Agricultural credit plays an important role in agricultural development. Credit is availed by the farmers from institutional and non-institutional sources and it will help them to purchase costly inputs and raise different crops. An agriculture loan encompasses all loans and advances granted by the borrowers to finance activities related to agriculture. Farmers need information about credit facilities, sources of credit, terms and conditions etc. In the present study, farmers have taken only institutional credit and 42 percent of the respondents have not availed any credit. The awareness of farmers about credit information, its access and gap are depicted in Table 1.5.

Table 1.5: Awareness, Access and Gap in Credit Information: Farmer Category - Wise

Sl. No	Type of Farmer	Aware	Access	Information Gap
1	Marginal Farmer	30(100)	21(70)	9[30]
2	Small Farmer	30(100)	22(73.3)	8[26.7]
3	Large Farmer	30(100)	21(70)	9[30]
4	All Farmers	90(100)	64 (71.1)	26[28.8]

Source: Compiled from primary data

Note: (i) Figures in simple bracket represent percentage share of each to category total

(ii) Figures in square bracket represent percentage share of gap to awareness

Even though 42 per cent of the farmers have not availed credit, they are aware about credit facilities of institutional and non-institutional agencies and more than seventy percent of farmers have access to it. They are aware about the terms and conditions of not only institutional sources but also non institutional sources. But still they are not availing credit due to their own reasons like they do not want to be in indebtedness and that credit will not improve their present standard of living. Main sources of credit information to the farmers are banks and financial institutions and fellow farmers. Farmers have direct contact in person and through mobile phones with banks especially co-operative banks and public sector banks. Loanee farmers are the major source of credit information of non - loanee farmers. Also, a local channel named “moon light” is providing credit information on due date of renewal, in case of Kisan Credit Card (KCC), interest rates on loans and related policy changes, to the farmers everyday. Information gap is obvious for credit information (28.8%), which is seen in all the categories of farmers.

Awareness, Access and Gap in Information on Agricultural Insurance

Agriculture in India is highly vulnerable to risks, due to natural calamities, like hurricane, droughts and floods, and attack of pests and wild animals. Destruction of crops, due to the attack of wild animals is a common menace in Thrissur district. It is necessary to protect the farmers from these hazards and ensure their credit eligibility for the next season. For this purpose, the Government of India has introduced many agricultural insurance schemes, throughout the country. Farmers need information on Central Government sponsored as well as State Government sponsored insurance scheme, for their crops (Table 1.1). Group insurance for paddy and insurance scheme, for rubber of the Rubber Board are popular in the study area. Information awareness, access and gap regarding agricultural insurance are given in Table 1.6.

Table 1.6: Awareness, Access and Gap in Information on Agricultural Insurance

Sl. No	Type of Farmer	Aware	Access	Information Gap
1	Marginal Farmer	24(80)	5(16.7)	19[79.2]
2	Small Farmer	24(80)	2(6.7)	22[96.7]
3	Large Farmer	23(76.7)	6(20)	17[73.9]
4	All Farmers	71(78.9)	13(14.4)	58[81.7]

Source: Compiled from primary data

Note: (i) Figures in simple bracket represent percentage share of each to category total

(ii) Figures in square brackets represent percentage share of gap to awareness

Table 1.6 shows that, information gap is very high in the case of agricultural insurance with nearly 82 percent of the people, who are aware of it having no access to the information. It is noteworthy that, more than 21 percent of the farmers, including large farmers are not even aware of the agricultural insurance schemes. Information gap is the highest

among small farmers, where nearly 97 percent of the people are aware, but have no access. Eligibility conditions and coverage of crops, like insurance not available for mixed crops, are the major obstacles in accessing information.

Those farmers who are aware have knowhow about coverage of crops, eligibility conditions, and procedural formalities of agricultural insurance. Group insurance scheme for paddy is managed by the Secretary of Padasekharam. Only a few farmers are accessing information from the Secretary. Rubber Board has implemented insurance scheme for rubber farmers. In Varantharappilly panchayat, as result of fire, acres of rubber cultivation have been destroyed and the farmers got the benefits of the Scheme. Farmers are obtaining agricultural insurance information, from Krishi Bhavan and Padasekharam. Large farmers, who are cultivating rubber have relatively more access to agricultural insurance, provided by the Rubber Board.

Awareness, Access and Gap in Information on Government Schemes

Government of India announces a number of schemes for farmers, from time to time. These schemes could be either central, state specific or a joint collaboration between the central and the states. There are several government schemes for the farmer producer group like National Horticulture Mission, Seed Production Scheme, Agricultural Technology Management Agency (ATMA), Kerala, Interest Subvention Scheme etc. As a beneficiary, farmer needs information on these schemes. Table 1.7 depicts information awareness, access and gap of the respondents regarding government schemes.

Table 1.7: Awareness, Access and Gap in Information on Government Schemes

Sl. No	Type of Farmer	Aware	Access	Information Gap
1	Marginal Farmer	29(96.7)	24(80)	5[17.2]
2	Small Farmer	29(96.7)	24(80)	5[17.2]
3	Large Farmer	29(96.7)	25(83.3)	4[13.8]
4	All Farmers	87(96.7)	73(81.1)	14[16.1]

Source: Compiled from primary data

Note: (i) Figures in simple bracket represent percentage share of each to category total

(ii) Figures in square brackets represent percentage share of gap to awareness

The awareness level about Government Schemes is very high and same for all category of farmers. But there exists information gap also for all three categories. Compared to agricultural insurance, the information gap for Government Schemes is less (16%). As already reported the most needed information is on government schemes (Table 1.1). Farmers have access to information on Interest Subvention Scheme and subsidies of banks and RKVY programme of Krishi Bhavan. Recently launched, Direct Benefit Transfer Scheme of Government of India is also popular among farmers. But, they do not know the exact name and details of the various schemes. Information on subsidy on inputs is accessed by the farmers, from Krishi Bhavan and Secretary of Padasekharam. Nutmeg farmers reported that, they do not have any information regarding government schemes and credit facilities for nutmeg cultivation.

Awareness, Access and Gap in Information on Labour Availability

Non availability of labour and increasing labour cost is the two major problems, faced by farmers in Kerala. But, in contrast to this, labour scarcity and increasing labour cost have not been reported as a major problem by the farmers, in the study area. As such, they are also not keen on obtaining information on availability of labour for agricultural operations, through labour banks. Awareness, access and gap regarding information on labour, is presented in Table 1.8

Table 1.8: Awareness, Access and Gap in Information on Labour Availability

Sl. No.	Type of Farmer	Aware	Access	Information Gap
1	Marginal Farmer	4(13.3)	0(0)	4[100]
2	Small Farmer	5(29.4)	0(0)	5[100]
3	Large Farmer	8(26.7)	0(0)	8[100]
4	All Farmers	17(18.9)	0(0)	17[100]

Source: Compiled from primary data

Note: (i) Figures in simple bracket represent percentage share of each to category total

(ii) Figures in square brackets represent percentage share of gap to awareness

Table 1.8, illustrates that, only a few respondents (19%) are aware about labour availability, through labour banks and they have no access to any source, resulting in cent percent information gap. Since, majority of the farmers (81%) are not aware and have not accessed information on labour, it can be inferred that, scarcity of labour and increasing labour cost are not a severe problem, in the study area. Those farmers who are aware about labour availability are also not accessing it. It was observed during the survey that, the family members of the respondent farmers are actively involved in the agricultural operations, especially in the case of marginal farmers. It is to be noted here that, the gap between awareness and access is 100 percent in the case of information on labour availability, since none of the very few aware farmer respondents, have access to the information.

CONCLUSIONS

Knowledge management can play a pivotal role, in enhancing agricultural productivity and addressing the problem of food insecurity. It is considered as, the fourth production factor after labour, land and capital, and is particularly critical in the agricultural sector. The most important agricultural information needs of the farmers, in the study area are about government schemes, related to loans and subsidies, followed by market information. In agricultural operations, the information gap is zero, in production and market information, which indicate that, these are the two important agriculture information, farmers accessing regularly. At the same time, the information gap is 100 percent for labour, in which the awareness is the lowest. After information on labour, the next highest information gap is in the case of agricultural insurance in which, eventhough the awareness is high accessibility is low.

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